

REMARKS

Claim 1 is being amended to further emphasize how the diffusion resistor of the present invention is substantially different from the regulated field emitter device as taught by the cited Gray reference that was used in rejecting claims in the parent case. As shown by Gray's Figures 24 and 26, both the source and extractor gate require particular bias voltages for proper operation of the field emitter device, and thus this device cannot be used as diffusion resistor due to such biasing. For example, as shown in Grey's Figure 24 and 26, and extractor-gate to source bias voltage V_1 is required.

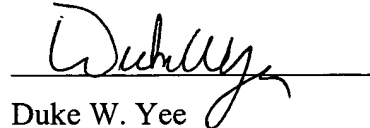
In addition, the drain of Gray's field emitter device is not in electrical contact with any external component as its purpose is to provide a contact-less source of electrons (col. 4, lines 6-14; col. 4 line 66 – col. 5, line 10; col. 1, lines 23-29). Thus, there is no teaching of the claimed feature that the first conductive contact and the second conductive contact form two ends of the diffusion resistor, as the FET drain is explicitly required to not be in any type of external electrical contact and thus could not function to be a terminal of a diffusion resistor. Because the extractor gate 170 and collector anode 160 are used for controlling operation of the field emitter device itself (by the proper application of bias voltages), they too could not function to be a terminal of a diffusion resistor.

As to Claim 20, such claim has been amended to further emphasize how the presently claimed use of the diffusion resistor with a driver circuit is substantially different from Gray's element 360 (Figures 14-17), such element 360 being equated with the claimed driver circuit. Gray's element 360 is the identical device (regulated field emitter device, which is a combination of voltage controlled current source and an electron field emitter as described by Gray at col. 3, line 55 – col. 4, line 14) that is being equated with the claimed diffusion resistor in the most recent Office Action. In contrast, Claim 20 is directed to a combination of the diffusion resistor and driver circuit, and thus the diffusion resistor and driver circuit are different functional elements.

The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the Examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

DATE: August 8, 2005

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Duke W. Yee", is written over a horizontal line.

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